



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/619,049   | 07/14/2003  | Raymond Q. Draggie   | 038190/260125       | 6078             |
| 826  | 7590        | 08/26/2004           | EXAMINER            |                  |
| ALSTON & BIRD LLP<br>BANK OF AMERICA PLAZA<br>101 SOUTH TRYON STREET, SUITE 4000<br>CHARLOTTE, NC 28280-4000 |             |                      | NGUYEN, VINCENT Q   |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2858                |                  |

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                                |  |
|------------------------------|-------------------------------|--------------------------------|--|
|                              | Application No.<br>10/619,049 | Applicant(s)<br>DRAGGIE ET AL. |  |
| <b>Office Action Summary</b> | Examiner<br>Vincent Q Nguyen  | Art Unit<br>2858               |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

**DETAILED ACTION*****Drawings***

1. The drawings are objected to because box 12 (Figure 5) should be labeled "Single Pole Double Throw Switch". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2858

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 8, 9, are rejected under 35 U.S.C. 102(b) as being anticipated by Jereb et al. (5,388,467).

Regarding claim 1, Jereb et al. discloses a device for testing a switch comprising (figure 1) a stage (36) upon which the switch (12) is mounted; an actuator (58) for actuating the switch (12) to thereby alter a state of the switch (12); a positioning device (26, 55) for controllably positioning at least one of said actuator (58) and said stage relative to the other such that said actuator (58) actuates the switch (12); and a measurement device (34) for monitoring travel of at least one of said actuator (58) and said stage (43) and for also monitoring an electrical condition of the switch (12) as the state of the switch is altered (Figure 2).

Regarding claim 2, Jereb et al. discloses measurement device is adapted to monitor a measure representative of an electrical resistance between at least two contacts of the switch (column 3, lines 34-35).

Regarding claim 3, Jereb et al. discloses said measurement device is adapted to monitor hysteresis of the switch as the state of the switch is again altered so as to return to an initial state (Figure 2).

Regarding claim 4, Jereb et al. the switch is one of a single throw switch (Column 8, line 5) and a double throw switch (Column 14, line 7), and wherein said measurement device monitors pre-travel, differential travel and over-travel of the switch (Figure 2).

Art Unit: 2858

Regarding claim 5, Jereb et al. discloses said actuator (58) comprises an actuator shaft.

Regarding claim 6, Jereb et al. discloses said actuation shaft comprises a load cell (56) for obtaining a proportional electrical measure of force applied to the switch (12) by said actuation shaft.

Regarding claim 8, Jereb et al. discloses a magnetic field generator for actuating the switch (Column 4, lines 17-28) (The step of measuring the force applied to the switch is magnetic field generator).

Regarding claim 9, Jereb et al. discloses a base (45); and an upstanding member (Element between 50 and 48) mounted upon said base (45) and adapted for movement in a first direction relative to said base, wherein said stage (43) is mounted to said upstanding member and adapted for movement in a second direction relative to said upstanding member.

4. Claims 1, 5, 7, 10, 11, 14, are rejected under 35 U.S.C. 102(b) as being anticipated by Terminiello et al. (5,117,189).

Regarding claim 1, Terminiello et al. discloses a device for testing a switch comprising (figure 1) a stage (At location 32) upon which the switch (15) is mounted; an actuator (20) for actuating the switch (15) to thereby alter a state of the switch (15); a positioning device (10) for controllably positioning at least one of said actuator (20) and said stage relative to the other such that said actuator (20) actuates the switch (15); and a measurement device (9) for monitoring travel of at least one of said actuator (20) and

Art Unit: 2858

said stage and for also monitoring an electrical condition of the switch (15) as the state of the switch is altered (Figure 2).

Regarding claim 5, Terminiello et al. discloses said actuator (20) comprises an actuator shaft (20).

Regarding claim 7, Terminiello et al. discloses said positioning device comprises a micrometer (18) for controllably positioning said actuation shaft relative to the switch (15).

Regarding claim 10, Terminiello et al. discloses a device for testing switch comprising (Figure 1) a stage (At location 32) upon which the switch is mounted; a micrometer (18) assembly comprising an actuator shaft (20) for actuating the switch to thereby alter a state of the switch; and a micrometer (18) for controllably positioning said actuation shaft (20) relative to the switch such that said actuation shaft (20) actuates the switch; and a measurement device (9) for monitoring an electrical condition of the switch as the state of the switch is altered (figure 2).

Regarding claim 11, Terminiello et al. discloses said measurement device (9) also monitors travel of said actuation shaft (Figures 2, 5).

Regarding claim 14, Terminiello et al. discloses said measurement device is adapted to monitor hysteresis of the switch as the state of the switch is again altered so as to return to an initial state (Column 2, lines 15-18).

Art Unit: 2858

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 12, 13, 15-27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Terminiello et al. (5,117,189) in view of Jereb et al. (5,388,467).

Regarding claim 12, Terminiello et al. discloses every subject matter recited in the claim except for the measurement device monitors pre-travel of the switch.

Jereb et al. discloses a system similar to that of Terminiello et al. and further discloses the measurement device (66) monitors pre-travel of the switch (Jereb et al.'s figure 2) for the purpose of determining the maximum force required to operate the switch.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the measurement device monitors the pre-travel of the switch as taught by Jereb et al. into the system of Terminiello et al. because monitoring the pre-travel of the switch is necessary to determine the maximum force required to operate the switch.

Regarding claim 13, Terminiello et al. does not disclose said measurement device is adapted to monitor a measure representative of an electrical resistance between at least two contacts of the switch.

Art Unit: 2858

Jereb et al. discloses a system similar to that of Terminiello et al. and further discloses the measurement device (66) is adapted to monitor a measure representative of an electrical resistance between at least two contacts of the switch (column 3, lines 35-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the device adapted to measure resistance as taught by Jereb et al. into the system of Terminiello et al. because "it is importance to assure that the switch, as manufactured, falls within required customer specifications for each of the switch characteristics." (Jereb et al.'s column 1, lines 38-42).

Regarding claim 15, Terminiello et al. does not disclose an upstanding member mounted upon said base and adapted for movement in a first direction relative to said base.

Jereb et al. discloses a system similar to that of Terminiello et al. and further disclose an upstanding member (Element between 50 and 48) mounted upon said base (43) and adapted for movement in a first direction relative to said base.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an upstanding member as taught by Jereb et al. into the system of Terminiello et al. because the movement would enhance the position adjustment to allow different kind of switches to be tested (Jereb et al.'s column 2, lines 8-19).

Art Unit: 2858

Regarding claim 16, Terminiello does not disclose said actuation shaft comprises a load cell for obtaining a proportional electrical measure of force applied to the switch by said actuation shaft.

Jereb et al. discloses a system similar to that of Terminiello and further discloses a load cell (56) for obtaining a proportional electrical measure of force applied to the switch by said actuation shaft.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the load cell as taught by Jereb into the system of Terminiello because the load cell would enhance the ability of testing different kinds of switches (Jereb et al.'s column 2, lines 8-19).

Regarding claim 17, Terminiello discloses a linear displacement transducer for providing an electrical representation of a position of the actuator shaft (Column 5, 34-40).

Regarding claims 18, 22, Terminiello discloses every subject matter recited in the claim (See figure 5) except for an upstanding member adapted for movement.

Jereb discloses a system similar to that of Terminiello and further discloses mounting assembly comprising (Figure 1) a base (43); an upstanding member (20 and the element between 50 and 48) mounted upon said base (43) and adapted for movement in a first direction relative to said base (The movement of bringing the actuator to actuate the switch).

Art Unit: 2858

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the upstanding member as taught by Jereb et al. into the system of Terminiello because of the same reason as set forth in claim 15.

Regarding claim 19, Terminiello discloses actuator comprises an actuation shaft (38).

Regarding claim 20, Terminiello does not disclose a load cell for obtaining a measure of force applied to the switch by said actuation shaft.

Jereb discloses a system similar to that of Terminiello and further discloses a load cell for obtaining a measure of force applied to the switch by said actuation shaft.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the load cell as taught by Jereb et al. into the system of Terminiello because of the same reason as set forth in claim 15.

Regarding claim 21, Terminiello discloses a micrometer (18) (See also figure 2) for controllably positioning said actuation shaft relative to the switch.

Regarding claim 23, Terminiello discloses a measurement device (9) for monitoring an electrical condition of the switch as the state of the switch is altered.

Regarding claim 24, Terminiello discloses measurement device (9) also monitors travel of said actuation shaft (Figures 4-5).

Regarding claim 25, Terminiello does not disclose said measurement device monitors pre-travel.

Art Unit: 2858

Jereb et al. discloses the system similar to that of Terminiello and further discloses a measurement device (66) monitors pre-travel (figure 2; column 7, lines 51-55).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the measurement device monitors the pre-travel as taught by Jereb et al. into the system of Terminiello because of the same reason as set forth in claim 12.

Regarding claim 26, Terminiello et al. does not discloses said measurement device is adapted to monitor a measure representative of an electrical resistance between at least two contacts of the switch.

Jereb et al. discloses a system similar to that of Terminiello et al. and further discloses the measurement device (66) is adapted to monitor a measure representative of an electrical resistance between at least two contacts of the switch (column 3, lines 35-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the device adapted to measure resistance as taught by Jereb et al. into the system of Terminiello et al. because "it is importance to assure that the switch, as manufactured, falls within required customer specifications for each of the switch characteristics." (Jereb et al.'s column 1, lines 38-42).

Regarding claim 27, Terminiello discloses said measurement device is adapted to monitor hysteresis of the switch as the state of the switch is again altered so as to return to an initial state (Column 2, lines 15-20).

Art Unit: 2858

**Contact Information**

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent Q Nguyen whose telephone number is (571) 272-2234. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (571) 272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



August 22, 2004

Vincent Q Nguyen  
Patent Examiner  
Art Unit 2858